



**YORK SOIL AND WATER CONSERVATION DISTRICT
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"It is our task in our time and in our generation to hand down undiminished to those who come after us, as was handed down to us by those who went before, the natural wealth and beauty which is ours."

John F. Kennedy

If we learn, finally, that what we need to "manage" is not the land so much as ourselves in the land, we will have turned the history of American land-use on its head.
Gaylord Nelson, Founder of Earth Day

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SC Department of Natural Resources

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Check out these websites:

www.yorkcountygov.com for aerial photos of any location; soildatamart.nrcs.usda.gov for soils information in all of SC; <http://websoilsurvey.nrcs.gov>; soils.usda.gov.



The Natural Resource Conservation Service (NRCS) supplies resources for the technical conservation programs in York County. Primarily, their assistance is through Farm Bill programs that provide funding for conservation management. Sign-up for the Farm Bill programs is continuous. Applications for 2008 funding have been accepted and are being processed.

2008 EQIP—Twenty applications have been accepted.

2008 WHIP—Two WHIP applications have been accepted.

The constructed wetland project that will serve as a model has been completed. Photographs are available in the office.

AUGUST SC FORESTRY COMMISSION PRESS

RELEASE: August was an unusually fiery month according to experts at the SC Forestry Commission. Agency Fire Chief Paul Watts said wildfire behavior has been more aggressive in recent weeks, due in part to the drought conditions that persist across the state. Watts said, "Our fire numbers are up, we're having more than usual, they're behaving more aggressively and are larger in acreage. We usually don't see flame heights extending beyond tree tops in August." In the first half of August, 215 fires were reported to the SCFC. The average for the last 10 years was 160. SC's wildfire season is normally in late winter to early spring. The drought has extended the season this year. Agency officials urge us to take precautions outdoors with regards to burning. (See page 3 for related article.)

Climate Change Facts, Warnings and Mitigation

Excerpted from Journal of Soil and Water Conservation, May/June 2007

The Intergovernmental Panel on Climate change (IPCC) has recently released three reports that collectively provide a comprehensive assessment of climate change. A snapshot of the findings is presented here.

THE PHYSICAL SCIENCE BASIS: On February 2, 2007, the IPCC issued its Working Group contribution, *The Physical Science Basis*. This report addresses climate parameters, the relationship between changes in climate and biogeochemistry, evaluation models, and attribution of climate change.

The report concludes the following: "Global atmospheric concentrations of carbon dioxide, methane and nitrous oxide have increased markedly as a result of human activities since 1750 and now far exceed pre-industrial values determined from ice cores spanning many thousands of years. The global increases in carbon dioxide concentration are due primarily to fossil fuel use and land use change, while those of methane and nitrous oxide are primarily due to agriculture."

IMPACT AND VULNERABILITY: On April 6, 2007, the IPCC issued its Working Group II contribution, *Impacts, Adaptation and Vulnerability*. This report provides an analysis of impacts on natural and human systems in response to observed and projected changes in the natural and human environment.

This report projects that by the mid to late 21st century, there will be fewer cold days and nights and more hot days and nights. The result will likely be increased insect outbreaks, increased energy demand for cooling, and decreased air quality in cities.

In addition, an increase in heat waves is likely, leading to reduced crop yields in warmer regions, increased wild-fire risks, increased water demand, water quality problems such as algal blooms, and increased heat-related human mortality.

Also very likely is an increase in heavy precipitation events, leading to damage to crops, increased soil erosion, adverse effects on surface and groundwater quality, and contamination of water supplies.

The report concludes that vulnerability to climate change can be exacerbated by the presence of other nonclimate stresses. According to the report, sustainable development can reduce the vulnerability to climate change; however, climate change may impede the world's ability to achieve sustainable development.

MITIGATION: On May 4, 2007, the IPCC issued its Working Group III contribution, *Mitigation of Climate Change*. The Working Group III document analyzes mitigation options in the near and long term. The report includes the following conclusions:

*With current climate change mitigation policies and related sustainable development practices, global greenhouse gas emissions will continue to grow over the next few decades.

*Changes in lifestyle and behavior patterns can contribute to climate change mitigation.

*Health co-benefits from reduced air pollution as a result of actions to reduce greenhouse gas emissions may offset a substantial fraction of mitigation costs.

*New energy infrastructure investments in developing countries, upgrades of energy infrastructure in industrial countries, and policies that promote energy security can help reduce greenhouse gas emissions.

*Agricultural practices collectively may be able to make a significant contribution by increasing soil carbon sinks, reducing greenhouse gas emission, and contributing biomass feedstocks for energy use.

*Forest-related mitigation activities can considerably reduce emissions from sources, reduce CO₂ removals by sinks, and be designed to create synergies with adaptation and sustainable development.

*Decision making about the appropriate level of global mitigation over time involves an iterative risk management process that includes mitigation and adaptation, taking into account actual and avoided climate change damages, co-benefits, and sustainability.

MORE INFORMATION:

The IPCC was established by the World Meteorological Organization and the United Nations Environment Programme to provide a nonbiased view of climate change. The IPCC reviews, evaluates and documents scientific, technical and socio-economic information relevant to existing and projected climate change. The IPCC's definition of climate change includes both natural and human causes. For further information, contact the IPCC Secretariat at: IPCC-Sec@wmo.int or visit www.ipcc.ch.

The Soil and water Conservation Society has recently published "Planning for Extremes", a report on conservation and climate change; look for a summary in their next issue.

CONSEQUENCES OF GLOBAL WARMING

Excerpted from Natural Resources Defense Council website: www.nrdc.org

The latest scientific data confirm that the earth's climate is rapidly changing. Global temperatures increased by about 1 degree Fahrenheit over the course of the last century, and will likely rise even more rapidly in coming decades. The cause? A thickening layer of carbon dioxide pollution, mostly from power plants and automobiles that trap heat in the atmosphere. Scientists say that unless global warming emissions are reduced, average U.S. temperatures could rise another 3 to 9 degrees by the end of the century—with far-reaching effects. Sea levels will rise, flooding coastal areas. Heat waves will be more frequent and more intense. Droughts and wildfires will occur more often. Disease-carrying mosquitoes will expand their range and species will be pushed to extinction. Many of these changes have already begun.

CLIMATE PATTERN CHANGES: Consequence—warmer temperatures. Average temperatures will rise, as will the frequency of heat waves. **WARNING SIGNS TODAY:** Most of the United States has already warmed, in some areas by as much as 4 degrees Fahrenheit. In fact, no state in the lower 48 states experienced below average temperatures in 2002. The last three five-year periods are the three warmest on record. Many places in North America had their hottest season or days on record in the late 1990's. Since 1980, the earth has experienced 19 of its 20 hottest years on record, with 2005 and 1998 tied for the hottest and 2002 and 2003 coming in second and third. **CONSEQUENCE: DROUGHT AND WILDFIRES** Warmer temperatures could also increase the probability of drought. Great evaporation, particularly during summer and fall, could exacerbate drought conditions and increase the risk of wildfires. The 1999-2002 national drought was one of the three most extensive droughts in the last 40 years. In 2002, the Western United States and experienced its second worst wildfire season in the last 50 years; more than 7 million acres burned. Colorado, Arizona and Oregon had their worst seasons. The period from April through June of 1998 was the driest three-month period in 104 years in Florida, Texas and Louisiana. Dry conditions produced the worst wildfires in 50 years in Florida in 1998. April through July of 1999 was the driest four-month stretch in 105 years of record-keeping in New Jersey, Delaware, Maryland, and Rhode Island. Montana, Colorado, and Kansas experienced severe dust storms in 2002, a product of dry conditions. September 2002 to February 2003 was the second driest six-month period on record for the Northeast. **CONSEQUENCE: MORE INTENSE RAINSTORMS:** Warmer temperatures increase the energy of the climatic system and lead to more intense rainfall at some times and in some areas. **WARNING SIGNS TODAY:** National annual precipitation has increased between 5 and 10 percent since the early 20th century, largely the result of heavy downpours in some areas. Some Eastern states each got more than double their normal monthly rainfall in June, 1998. Severe flooding in Texas, Montana and North Dakota during the summer of 2002 caused hundreds of millions of dollars in damage. **WARMING WATER—CONSEQUENCE: MORE POWERFUL AND DANGEROUS HURRICANES.** Warmer water in the oceans pumps more energy into tropical storms, making them more intense and potentially more destructive. Rising global temperatures will speed the melting of glaciers and ice caps and cause early ice thaw on rivers and lakes. **WARNING SIGNS TODAY:** The number of category 4 and 5 storms has greatly increased over the past 35 years along with ocean temperature. At the current rate of retreat, all of the glaciers in Glacier National Park will be gone by 2070. Since 1995, the northern section of the Larsen B ice shelf in Antarctica and all ice thickness has shrunk by 40 percent. **CONSEQUENCES: SEA-LEVEL RISE** Current rates of sea-level rise are expected to increase as a result both of thermal expansion of the oceans and of the melting of mountain glaciers and ice caps. Consequences include loss of coastal wetlands and barrier islands and a risk of flooding in coastal communities, such as the Gulf of Mexico and Chesapeake Bay. **WARNING SIGNS TODAY:** The current pace of sea-level rise is three times the historical rate and appears to be accelerating. Global sea level has already risen by four to eight inches in the past century. It is estimated that it will rise by an additional 19 inches by 2100. **ECO-SYSTEM DISRUPTION: CONSEQUENCE: ECOSYSTEM SHIFTS AND SPECIES DIE-OFF.** The increase in global temperatures is expected to disrupt ecosystems and result in loss of species diversity, as species that cannot adapt die off. More than one million species could be committed to extinction by 2050 if global warming pollution is not curtailed. Some ecosystems are likely to disappear because warmer local climates or coastal sea level rise will not support them. **WARNING SIGNS TODAY:** A recent study found that at least 279 species of plants and animals are already responding to global warming. Species' geographic ranges have shifted toward the poles at an average rate of 4 miles per decade and their spring events have shifted earlier by an average of 2 days per decade. In California, shoreline sea life is shifting northward. In Florida, there are eroding shorelines, dying coral reefs, saltwater intrusion into inland freshwater aquifers, an upswing in forest fires, and warmer air and sea temperatures. Over the past 25 years, some penguin populations have shrunk by 33% in parts of Antarctica, due to declines in winter sea-ice habitat. These same conditions are also threatening the seal and polar bear populations.

Unless we act now, our children will inherit a hotter world, dirtier air and water, more severe floods and droughts, and more wildfires.

Filter Fabric

York Soil and Water Conservation District is proud to offer filter fabric for sale to York County citizens. This fabric is sold for \$1.70 per linear foot. The filter fabric is 12 feet wide and is an 8 ounce, non-woven geotextile material. It has many applications on farms, such as heavy use areas around barns, under water troughs, hay rings, mineral feeders and on roads. *In 2006, YSWCD sold 2,250 linear feet of filter fabric.* Contact our office if you have any questions.

No-Till Drill Rental

York Soil and Water Conservation District is proud to offer use of no-till drill equipment for rent to York County citizens. Two no-till drills are available for rent – Great Plains and Hay Buster. This program offers the equipment for a minimum charge of \$50.00, which covers usage to plant 7 acres. An additional cost of \$7.00 per acre is charged to those users who plant over 7 acres. Deposits are required prior to rental. Contact the York Soil & Water Conservation District office at (803) 684-3137, extension 3, to receive your copy of the rental agreement for this program and to schedule use of this equipment for this planting season. *For the 2006 season, 45 people used the no-till drill system for planting.*

WHY MAKE COMPOST?

Compost is one of nature's best mulches and soil amendments, and you can use it instead of commercial fertilizers. Best of all, compost is cheap. Using compost improves soil structure and texture and increases the soil's water holding capacity. Compost loosens clay soils and stimulates root development in plants. The organic matter provided in compost provides food for microorganisms, which keep the soil in a healthy, balanced condition. Nitrogen, potassium, and phosphorus will be produced naturally, so few if any soil amendments will need to be added. Gardeners have long understood the value of this rich, dark, earthy material in improving the soil and creating a healthful environment for plants. Easy Turn composters are available through YSWCD. They are simple and easy to use. Just add your materials to it and spin! For more information, phone 684-3137, ext. 101. The current price is \$75.00.

YOU NEED A RAIN BARREL!!

Saving water from rain is an ancient practice that is again becoming popular. Water is becoming a more precious resource. Rain is naturally soft and free of chlorine, fluorine and other harmful chemicals. Using saved rainwater will make drought less damaging, saving you stress and money. The barrel needs to be placed on a suitable base such as a concrete block and directly under a gutter downspout or other water source. Ordering and pick-up of a rain barrel will be through the York Soil and Water Conservation Office at 1460 East Alexander Love Hwy., in York, SC. The current price is \$65.00.

WATERSHED POLLUTION EDUCATION PROGRAMS AVAILABLE FOR SCHOOLS AND GROUPS



Water pollution comes from many sources. Nonpoint sources contribute a great deal to the pollution in our water bodies. The combined affect of pollution from many small sources can have a real impact on the quality of our shared water resources. EnviroScape is a unique, interactive learning tool that helps people make a visual connection between land use and water quality. Once they see it, they don't forget it. The EnviroScape dramatically demonstrates water pollution—and its prevention. EnviroScape programs communicate to people of all ages that we have responsibilities in preventing water pollution. The EnviroScape is engaging and effective in creating a real sense of understanding through experience and hands-on demonstration. This makes complex issues much clearer and helps people see how to prevent water pollution in their own communities. The three-dimensional landscape illustrates residential, recreational, agricultural, industrial and transportation areas—all representing possible sources of water pollution. Children and adults learn throughout a typical community to see how their actions and those of others may affect our water quality. EnviroScape actually emphasizes pollution prevention with a follow-up demonstration that shows how to prevent such pollution through the use of best management practices. *In 2006-07, 1,445 students and adults experienced the EnviroScape.* To schedule a demonstration provided as a service by the York Soil and Water Conservation District, contact our office today.

DROUGHT

A drought is an extended period of months or years when a region notes a deficiency in its water supply. Generally, this occurs when a region receives consistently below average precipitation. However, the effects can also be worsened by man. It can have a substantial impact on the ecosystem and agriculture of the affected region. Although droughts can persist for several years, even a short, intense drought can cause significant damage and harm to the local economy.

CONSEQUENCE OF DROUGHT: Periods of drought can have significant environmental, economic and social consequences including:

- *Death of livestock
- *Reduced crop yields
- *Wildfires
- *Shortages of water for industrial and water-dependent enterprises: marinas, landscapers, golf courses, water theme parks, etc.
- *Stringent water-use limitations for the general population including firefighting efforts and the dilution of wastewater
- *Desertification—The process of becoming desert (as from land management or climate change).
- *Reduced electricity production due to insufficient coolant
- *Reduced water quality

RECOMMENDATIONS FOR LAKE WILEY BUFFER ADDRESSED BY DUANE CHRISTOPHER TO COUNCIL

Duane Christopher, ASLA, of DFC&A, recently addressed York County Council on the proposed Lake Wylie bufferyard ordinance. He strongly believes in protecting the environment and the quality of water in the Catawba River. However, he believes that the ordinance is erroneous as it reads now and directly opposes what people try to achieve by living on the shore. It in many ways directly conflicts with an owner's ability to maintain his or her property in an environmentally sensitive manner. He proposes considering tabling the proposed amendment and any ordinances which may affect the Lake Wylie buffer ordinance in favor of appointing a citizens group which will study all the concerns and ideas surrounding this matter and make a recommendation back to York County Council for appropriate changes. He also believes there is much more information and study to do regarding good lake front property buffer practices in creating a common sense and balanced approach. He spoke publicly at the Council meeting on July 16 and July 17th and he also spoke on WRHI radio in Rock Hill on August 2. There was a related work session on September 25 at 7:00 p.m. Mr. Christopher is also a member of the York Soil and Water Commission.

The ordinance was first conveyed as a document to prevent clear cutting by developers, to protect the lake from sediment and poisonous chemicals and to encourage thoughtful landscaping and building along its shores as well the potential of creating wildlife habitats.

York Soil & Water Cons. Dist. and Affiliates—Partners in Conservation

Please return with your tax-deductible donation. Make all donations payable to: **York Soil & Water Conservation District** and mail or deliver to: 1460 East Alexander Love Highway, York, SC 29745.

AFFILIATE MEMBERSHIP FORM 2007

CONTACT NAME: _____

COMPANY: _____

MAILING ADDRESS: _____

_____ **AFFILIATE MEMBER**

(\$35 to \$49.99)

_____ **CONSERVATIONIST**

(\$100 to \$249.99)

_____ **SOIL & WATER PROTECTOR**

(\$50 to \$99.99)

_____ **GUARDIAN**

(\$250 to \$999.99)

_____ **STEWARD OF THE LAND**

(\$ 1,000 and Above)

THANK YOU FOR YOUR SUPPORT! ! !

YSWCD expresses a BIG THANK YOU to our 2007 Affiliate Members!!

GUARDIAN

Farmer's Service Center



SOIL & WATER PROTECTERS

Jamie Propst, Propst Lumber and Logging

Rock Hill Coca-Cola Bottling Co.

Richard Houk

CONSERVATIONIST

Tumble T. Bart, Ted Bartee

Rick Jiran, Duke Energy

STEWARD OF THE LAND

SC Department of Natural

Resources

York County Council

Board Meetings

The York Soil and Water Conservation District Board meets on a monthly basis to deal with conservation issues within York County. The public, as well as cooperating agencies, is invited to attend District meetings and provide input. A meeting notice is posted at the USDA Service Center. Unless otherwise noted, meetings are held the 4th Tuesday of each month at 7:00 p.m. Noon meetings are also planned on occasion. The actual meetings are held at the USDA Service Center, 1460 East Alexander Love Highway, York, SC 29745.

**If you do not wish to receive this newsletter, please contact our office at
803-684-3137 ext. 3, or email judy.brown@sc.nacdnet.net.**

All programs and services of the Conservation District, USDA-NRCS, and the SC DNR, Division of Land, Water and Conservation are offered on a non-discriminatory basis without regard to race, color, national origin, religion, sex, age, marital status or handicap.

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